

44. Notes on East African Birds (chiefly nesting habits and endo-parasites) collected 1920-1923. By ARTHUR LOVERIDGE, F.E.S., C.M.Z.S.

[Received August 14, 1923: Read November 6, 1923.]

The collection for which the birds mentioned in this paper were shot consists of 1558 skins representing 57 of the 63 families of East African birds, 311 of 398 genera and 761 species. Only 150 eggs were taken in the period covered by this paper.

As before*, a few notes on some of the European migrants have been included, but with this exception simple records are avoided, though many rarities such as *Cossypha albigularis* Rehw., *Callene sharpei* Shell., and *Turdinus stictigula* Rehw. were collected.

Dr. Hartert† has described the following species and races from the present material:—*Cinnyris loveridgei*, *Arizelocichla neumanni*, *Eremomela flaviventris tardinata*, *Turdus milanjensis uluguru*, *Lioptilus stierlingi uluguru*, and *Saxicola torquata promiscua*; and Dr. Neumann‡, *Anthreptes longuemarei neglectus*.

My grateful thanks are due to Dr. Hartert and Mr. Arthur Goodson for going through a great deal of the collection and making the necessary determinations. To Dr. Baylis also for much kindness shown in the identification of the parasitic worms mentioned in the following pages.

The only localities outside Tanganyika Territory referred to are Frere Town and Nairobi. As difficulty may be found in locating some of the other places (English and not German spelling of place-names is given), I have arranged them according to their districts and as far as possible from east to west and south to north, *i. e.* working from the Central Railway.

Dar es Salaam District.—Dar es Salaam, Pugu.

Morogoro District.—Bagilo, Morogoro, Mkindo River, Wami River, Mkata River, Tindiga, Kinamba, Ilonga, Kipera, Madazini, Kilosa.

Dodoma District.—Dodoma, Kilamatinde, Mahaka, Mbonoa, Ndogwe, Suna, Mbulu's, Mdjengo's.

Kondoa-Irangi District.—Mtali's, Zengeragusu, Usshora, Ulugu.

Tabora District.—Tabora, Izikisia, Ndala, Simbo, Tambali, Lugu, Wembere Flats.

Mwanza District.—Mwadira, Shanwa, Sagayo.

I witnessed an interesting display of curiosity exhibited by birds at the sight of tortoises. A cage containing tortoises was

* Loveridge, P. Z. S. 1922, pp. 837-862: "Notes on East African Birds collected 1915-19."

† Hartert, Bull. Brit. Ornith. Club, xlii. p. 49; xliii. p. 149; xliv. p. 6, 1923.

‡ Neumann, Sonderabdruck aus Ornithologische Mon. xxx. p. 1 (1922).

placed on the path one afternoon at Nairobi, and the tortoises were trying to get out. Some forty birds collected, and evinced the greatest interest, craning their necks this way and that and uttering cries. Twice a sunbird hovered close to the cage the better to observe. I noted ten species of birds through the glasses, and they remained for half-an-hour, and only left because disturbed; therefore I had ample opportunity of watching them. The species represented were:—

Nectarinia kilimensis Shell.
Parus albiventris Shell.
Serinus icterus Vieill.
Serinus striolatus affinis Reichn.
Passer griseus sudanicus Neum.
Ploceus reichenowi Fisch.
Ploceus spekei Heugl.
Cossypha heuglini Hartl.
Dioptrornis fischeri Rehw.
Colinus striatus kikuyuensis van Som.

NECTARINIDÆ.

CINNYRIS SENEGALENSIS INÆSTIMATA Hartert.

A nest containing two fresh eggs of the East African Purple-shouldered Red-breasted Black Sunbird was blown down from a mango-tree in which it had been built (Kilosa, 18. vii. 21).

A nest which was being built last month in a rhododendron-bush, within six feet of the verandah and seven feet from the ground, held two perfectly fresh eggs of a very pale colour to-day. Unfortunately in replacing it I cracked one. The bird, however, continues to sit on the remaining egg. She leaves it a great deal during the day, and on returning flies straight into the nest from another bush thirty feet away; hitherto I have never seen her perched on the home bush (Kilosa, 27. xii. 21).

Latterly I have seen the bird cling to the front of the nest before entering. Within the past few days the egg has been blown out of the nest! (Kilosa, 1. i. 22).

A month after the egg was blown down, the nest itself suffered the same fate. The bird is now sitting on her new nest fastened to the tip of a branch of a rubber-tree and about twelve feet from the ground (Kilosa, 12. ii. 22). A nest containing young is suspended from the tip of a branch of a big tree (Kilosa, 15. i. 23). A nest with two fresh eggs (Ilonga, 19. iv. 23).

CINNYRIS LOVERIDGEI Hartert.

During the month of May 1922 my native collector obtained two adult males and two immature females of this species, hitherto only known from a single male collected on 24. vi. 21. These four specimens come from Bagilo, Uluguru Mtns., Tanganyika

Territory. Some adult females were afterwards obtained; they are very similar to the male. As the immature plumage has not been described, I do so here.

Upperside olive-green, with slight bluish-grey iridescences becoming so pronounced on head as to form a smoky-blue crown; tail-coverts yellowish-olive; wings blackish-brown; outer webs of the primaries with very narrow, inner with wider olive-yellow outer edges; lesser and median upper wing-coverts like back, longest like primaries; sides of head like crown; throat greyish anteriorly, greenish-yellow posteriorly and on forebreast; breast, abdomen, and under tail-coverts whitish-grey with yellow wash.

Wing 54 mm. in this specimen, which is being presented to the Tring Museum; 56 mm. in second specimen in my own collection; tail 38 mm.; outer tail-feathers 28 mm.; bill from forehead 21 mm.; tarsus 20 mm.

PARIDÆ.

ANTHOSCOPIUS CAROLI subsp.

A nest of the Penduline Tit containing almost fully-fledged young was found in a tree about 20-25 feet from the ground. Tree of the maiombo type in scattered bush-country on a hillside (Kilosa, 27. xii. 20).

MOTACILLIDÆ.

MOTACILLA AGUIMP Dumont.

A nest of the African Pied Wagtail (in the thatch of a hut) which held one egg on the 12th had three to-day (Simbo, 12. xi. 21).

A nest with three young several days old was found in a thatch, the young being fed on termites which were fighting strongly after recent rain (Ndala, 15. xi. 21).

A bird was seen to leave nest in thatch containing one egg which had a fairly advanced embryo in it (Tabora, 18. xi. 21).

Young ones were found in a nest in a thatch only eight feet from the ground a few days ago and flew to-day (Kilosa, 29. vii. 22).

Yesterday being the first rainfall of the lesser rains, I examined the nest referred to in the last note, and was surprised to find the bird brooding three eggs in the old nest. The species is obviously double-brooded. I was particularly pleased, as the young were taken by a native from the last sitting, and I returned them amidst much clamour from the old birds, which show confidence by re-using the same nest (Kilosa, 18. xii. 22). Young standing up in nest (31. xii. 22). Nest empty (4. i. 23). Fresh nest built alongside but four inches from the old one. Bird pulling grass from thatch to build with (15. ii. 23). Three eggs in nest (early iii. 23).

FRINGILLIDÆ.

EMBERIZA FLAVIVENTRIS Steph.

A nest of the Yellow-breasted Bunting was found yesterday; it contained two eggs, and is situated in a maiombo-bush five feet from the ground. The third egg completing the clutch was laid to-day. The eggs are very similar to those of the English Bullfinch. The nest is built of dry grass-stalks lined with very fine roots or root-fibres; it is rather untidy and exposed. The bird is extraordinarily wary, and will not approach the nest when anyone is in the vicinity (Kilosa, 24. xii. 20).

SERINUS SULPHURATUS SHELLEYI Neum.

Three eggs were found at Kabare on 11. i. 23. The nest was made of fine rootlets and lined with down from plants. Bird shot.

PLOCEIDÆ.

URÆGINTHUS NIASSENSIS Rehw.

Two nests of the Nyassa Blue Waxbill, each with two eggs (Kilosa, 5. ii. 21). Nest and two eggs (11. iv. 21). Nest and five fresh eggs (30. v. 21). Two nests near house contain young (19. iii. 21). Two more nests found; one the bird has not finished building and is still carrying grass; the other bird is sitting on a clutch of eggs (25. iii. 22). The bird which was building on the 25th has now four eggs. The nest, which is built in a lime-tree six feet from the ground, merely rests on the branches, and can be lifted off and replaced without disarranging it; it is neatly lined with fowl feathers (5. iv. 22).

Casually looking out of the railway-carriage window at the telegraph posts (which are girders set upright with a smooth surface on the west and a concavity on the east), I was struck by the number of posts carrying nests (presumably last year's), and from the time I started counting till we reached the station, I had counted 47, which did not include the remains of old nests. It interested me, as it showed the adaptability of the species to modern conditions, for they had seized on this site in such numbers that two out of three posts were occupied despite the abundant bush close by. Another species of Weaver (*Ploceus* sp.) had gone one better in selecting a snake-free site, and a number of its nests were attached to the wires midway between the posts, though some were against them, but not more than half-a-dozen nests of this kind were seen (Pugu, 17. vi. 22).

LAGONOSTICTA SENEGALLA?

A nest built over that of some wasps was in a small tree and contained young (Kilosa, 13. xi. 22).

PYTELIA AFRA CINEREIGULA Cab.

A nest containing four fresh white eggs measuring 16×12 mm. was found in a maiombo-bush about seven feet from the ground; the bird had just commenced sitting (Kilosa, 25. iii. 21).

DINEMELLIA BÖHMI Rehw.

Giant Weavers were usually met with in parties numbering three to six individuals, of which one would be in a tree (? on guard) and the others feeding on the ground. They were extraordinarily difficult of approach. They were seen building their huge nests of twigs at Usshora (27. xi. 21), Ulugu (7. xi. 21), Wembere (8. xi. 21), Luguo (9. xi. 21), Tambali (10. xi. 21), Simbo (12. xi. 21). I have not seen them elsewhere.

ANAPLECTES RUBRICEPS Sund.

A Red-headed Weaver flew from nest containing one fresh egg measuring 20×14 mm. and of a uniform pale blue colour. The nest was situated at the extremity of an acacia-thorn branch overhanging the road, about ten feet from the ground. Some rain had already fallen in the district (Tambali, 11. xi. 21).

A nest was found containing two very unequal-sized young in it (Izikisia, 16. xi. 21).

QUELEA SANGUINIROSTRIS INTERMEDIA Rehw.

From 4.30 to 6.30 p.m. a most extraordinary flight of Southern Masked Weaver-Finches took place; millions of birds must have taken part, and I have never seen anything like it. They were in a series of huge flocks which had almost the appearance of smoke as each thinned and thickened in the undulating flight. The intervals between the flights were very small, so that there was practically one continuous stream of birds following the course of the river N.E. to S.W. to their sleeping places in the reed-beds (?) of a large body of permanent water called "nyanza" by the local natives (Simbiti River, 13. x. 22). About 7 a.m. we were fortunate in witnessing part of the return flight, but it was a mere nothing compared with the evening flocks (14. x. 22).

CORVIDÆ.

CORVULTUR ALBICOLLIS Lath.

A pair of White-necked Ravens made a great outcry on my approaching a rocky kopje where a nest was found under an overhanging rock at a great height. The young appeared to have flown, but there was no sign of them (Mbulu's, 11. x. 21).

A nest was found in an almost inaccessible situation under an overhanging rock on some rocky hills. It contained four very

markedly different eggs and a newly-hatched young one (Mtali's, 22. x. 21).

I visited the last-mentioned site a little earlier this year and found five eggs; the bird had only just commenced to sit. My collector obtained the eggs by fastening his fez to a withy and fishing them out one at a time, which he accomplished successfully though in a very precarious position himself all the time (Mtali's, 9. x. 22).

CORVUS SCAPULATUS Daud.

The nest of a White-bellied Raven was found in a bussu-palm about forty feet from the ground, the palm being in open bush-country. The nest, which was on a heavy base of twigs, had a lesser foundation of bark cord commonly used, and discarded, by porters. On this was a thick lining of goat's hair and a few ends of string. It contained four typical crow eggs measuring 41×28 mm., much smaller than the raven's, which were 50×33 mm. (Izikisia, 16. xi. 21).

Nest at the top of a slender fir-like tree in the town contained three young. Nest was fully sixty feet from the ground (Kilosa, 28. xi. 21).

Building in a baobab at Pooma (4. x. 22). Four newly-finished nests in stunted trees growing from the rocks at Shanwa (21. x. 22).

DICRURIDÆ.

DICRURUS AFER LUGUBRIS Hempr.

When collecting lepidoptera I caught a Black Drongo in my net; its stomach contained beetles (Frere Town, 29. vii. 20).

Flushed a bird from its nest built in the fork of a branch of a low tree at a height of seven feet from the ground. The nest was made of fibres and grasses fastened together with spider-web but unlined. It held three perfectly fresh eggs, one of which was misshaped with a protuberance at the lower pole. The ground-colour of these eggs was slightly pinkish, upon which were superimposed brownish-red blotches, particularly thick around larger pole. I watched a male displaying a few days ago, rising and diving before the female which was sitting on a tree (Tambali, 21. x. 21).

LANIIDÆ.

LANIUS CABANISI Hartert.

Nest built entirely of rootlets (coarser used for exterior, finer for lining) measured $5 \times 4\frac{1}{2}$ inches outside, $4 \times 3\frac{1}{2}$ inside, and $1\frac{1}{2}$ inches in depth. Clutch consisted of three fresh eggs measuring 26×19 mm. Pale olive ground-colour, with blotches of purplish-brown and brown grouped around the larger pole; a few scattered elsewhere (Tindiga, 26. i. 22).

LANIUS COLLURIO Linn.

A Hippoboscid (*Olfersia* sp.) was taken on a shrike at Kimamba, 3. iv. 23. Worms (*Filaria nodulosa* Rud.) from a Dar es Salaam specimen, 24. i. 19.

HARPOLESTES SENEGALUS ORIENTALIS Cab.

The Coastal Large Bush-Shrike was nesting at Kilosa on 5. i. 23. Full clutch of two eggs in a maiombo-tree at a height of seven feet from the ground.

MALACONOTUS POLIOCEPHALUS BLANCHOTI Steph.

A nest of the Brown-breasted Giant Shrike with three eggs was found by my collector (Kilosa, 16. xii. 21).

CAMPOPHAGIDÆ.

CORACINA PECTORALIS Jard. & Selby.

A female White-bellied Grey Cuckoo-Shrike, which is the first I have obtained in this district, had a nematode (*Physaloptera* sp.) in its stomach (Kipera, 8. ix. 22). Mr. Goodson notes that the wing and general size is smaller and somewhat paler than in typical West African *C. pectoralis*.

PYCNONOTIDÆ.

PYCNONOTUS TRICOLOR MICRUS Oberh.

A nest of the Kilimanjaro Yellow-vented Bulbul with two eggs in lime-tree seven feet from the ground; bird sitting (Kilosa, 31. xii. 22). Nest with three eggs in a thorn-bush six feet from the ground (Kilosa, 7. i. 23).

I encountered some natives chewing the red berries of some wild fruit which was very gummy and had a nasty dry taste and which they called Onembo in Kinyaturu. I thought they were eating this fruit and attempted to do so myself, but presently learned that they were on their way to trap birds, and this constituted their "bird-lime," for, when chewed, it becomes a very thick gum. This they smear on a fine thread stretched near the edge of the water-holes, which in this arid district are few and far between, and consequently much resorted to by birds, which collect to bathe and drink.

In about two hours these men returned with some twenty bulbuls and a weaver, all of which they had plucked, except for the heads which they had inserted through a string worn below the knee, the naked bodies depending. The result was quite ornamental, but they were destined to be eaten shortly. These men said that the Dongerero (local name for this bulbul) got stuck when shaking the water from their wings after bathing (Ndogwe, 1. x. 22).

I was sitting beneath a tree when suddenly, with loud cries;

a very frightened bulbul fell at my feet and commenced to hop and scramble away across a patch of open ground to some rank grass fifty feet away. I had to run to overtake it, and, when caught, it was found to have its left foot and wing firmly in the grasp of a very fine leaf-insect (*Zabalius ophthalmicus* Walk.) some three inches in length. The strong grip of the insect was astonishing, and considerable difficulty was experienced in disengaging it from the bulbul, which I then released (Madizini, 3.iii.23).

PYCNONOTUS DODSONI subsp.

A nest of the Mombasa Yellow-vented Bulbul containing two partly-incubated eggs was found on the mainland, Mombasa, on 27. xii. 20.

PHYLLASTREPHUS CABANISI SUCCOSUS Rehw.

A nest containing two eggs was taken at Kabare on 12. i. 23. It was composed of a foundation of dry sedges and leaves and lined with very coarse rootlets.

S Y L V I I D Æ.

EREMOMELA FLAVIVENTRIS TARDINATA Hartert.

A nest measuring 60 × 40 mm. deep inside was composed of fine fibres, grass, and raw cotton, lined with very fine grass and a little cotton. It contained two white eggs finely speckled with black and purple spots, especially thick around the larger poles. They measured 15 × 10.5 mm. My collector shot both parent birds (the types) from the nest (Sagayo, 2. xi. 22).

OISTICOLA NANA Fischer.

The hen bird was shot from a nest of not very definite shape loosely woven of dry grass, lined with finer grass and much down of the Javan silk-cotton tree, or kapock as it is locally called. The three eggs measured 14 × 11 mm., and were white finely streaked and speckled all over with pale pink. There were very small embryos in the eggs (Kilosa, 17. i. 22).

ACROCEPHALUS GRISELDIS Hartl.?

I have queried this identification only as regards the nesting note, as the nesting bird was not shot, but appeared to me to be the Lesser Great Reed-Warbler (*A. griseldis*), which I had already collected at the spot on 12. ii. 21, but the Great Reed-Warbler (*A. arundinaceus*) and the Sedge-Warbler (*A. schuonobenus*) were collected in the same swamp on 3. i. and 22. iv. 21 respectively.

Two purple-blotched eggs in a nest suspended from four sedges in a swamp. Bird sitting very close (31. v. 21). One egg hatched (Kilosa, 1. vi. 21).

HIRUNDINIDÆ.

RIPARIA FULIGULA RUFIGULA Fisch. & Rehw.

A nest of the Brown-throated Rock-Martin built under the eaves of a house contained two very bad eggs on which the bird was sitting on 17. ii. 22. On 17. iii. 22 the nest was again examined and a clutch of two fresh eggs found and taken. On 4 & 5 iv. 22 the birds had but one egg in the nest; this was left. On 1. v. 22 the bird was again sitting on three eggs measuring 19×8 mm. White with brownish or reddish speckles over the whole surface, with a marked tendency to grouping round the larger pole (Kilosa, 1. v. 22). In iv. 23 the nest was examined several times and the bird found to be sitting on a single infertile egg.

HIRUNDO SMITHII SMITHII Leach.

A Wire-tailed Swallow's nest containing young under eaves of my house (1. xii. 20). After a night and morning of heavy rain I found a newly-fledged Wire-tailed Swallow flapping wearily on the ground. After a few hours' drying in the house it was able to fly away (13. iii. 21). I notice a pair of these swallows have neatly trimmed off the broken edge of a nest of *H. puella abyssinica* which contained young in January and have laid two eggs (27. iv. 22); this was the full clutch (28. iv. 22). Bird just begun to sit on clutch of three eggs (31. iv. 23). Three nests each with three young (Kilosa, 6. v. 23).

Of nests examined to-day one was ready for eggs, a second held three fresh eggs, a third three hard-sat eggs, two nests held newly-hatched young, and one three fledglings almost ready to fly (Frere Town, 30. v. 23).

HIRUNDO PUELLA ABYSSINICA Guér.

Northern Stripe-breasted Swallows nesting in bath-room; young fledged to-day (13. iii. 21). Commenced building on verandah (26. xi. 21). Feathering nest; each of the three adjacent houses has also a nest (26. xii. 21). I saw one swallow on entering nest break off the entrance tunnel, which had but a poor base of attachment in the enamelled ceiling-boards (5. i. 22). As I was passing beneath the nest three-quarters of an eggshell was ejected. I therefore investigated two other nests, and found one to contain incubated white eggs without markings, the other young (6. i. 22).

The first heavy rain falling since the catastrophe of the 6th inst. set the swallows to work at repairing the damage. It is interesting to see the patchiness of the building materials, both grey and red mud in alternating patches according to the source from whence fetched (10. i. 22). Another eggshell was found beneath the nest mentioned on the 6th. These swallows are having trouble with a third, which sometimes succeeds in entering their nest (17. i. 22).

A nestling found dead beneath this nest (18. i. 22). The two remaining young ones found dead beneath nest this afternoon. They appear to have been dead some time; one had congealed blood upon its back. I surmise that they were killed by the swallow which entered the nest some days ago and caused such a commotion, and they have been thrown out of the nest by their parents (19. i. 22).

About this time there was a fresh egg lying broken beneath nest (1. ii. 22). The tunnel and anterior third of the nest have been broken down, so I have removed the rest (3. xi. 22). I revisited this house after an absence of some six months and found that these persevering birds had rebuilt the nest, which had also fallen down again and again to judge by the débris beneath. Their efforts had at last been crowned with success, as I picked up a fledgling twenty feet away. It rested quietly on my hand until its parents came sweeping around with encouraging cries, whereupon it flew for fifty yards with them flying around it all the time (31. xii. 22).

There is another nest of this species in which, the tunnel having been broken off, a pair of Swifts (*C. affinis*) built their feather and straw nest on to that of the swallows. My attention was drawn to this nest by a pair of sparrows hanging to the outside and screaming! Beneath the nest was a freshly-broken sparrow's egg, and inside the nest was a hen swift with enlarged ovules, ready to lay perhaps in a week's time (5. v. 22). A month or so later a swift's egg was found broken beneath this nest. Continual disputes between the sparrows and the swifts take place.

A Northern Stripe-breasted Swallow was found sitting on two eggs (31. xii. 22). Another nest, which has been a long time in building, hatched out young to-day (7. i. 23). These young when disturbed at night by a light make a noise not unlike that of a Square-marked Toad, and most unbirdlike. Another nest; hatched eggshell found beneath (5. iii. 23).

CYPSELIDÆ.

APUS AFFINIS Gray.

As many scores of Square-tailed White-rumped Swifts were flying about the boma and in and out of their nests, I examined dozen of the latter. They were all empty and, I believe, unlined (Kilosa, 4. vii. 22). A broken egg lying beneath a nest may have been there for a couple of months whilst I have been away. Some natives drew my attention to a swift caught in the web of a spider (*Nephila* sp.) some three feet below the guttering and two feet from the wall and fully thirty feet from the ground. The bird was perfectly helpless, spinning round and round in space. On getting it down, its feet were found to be firmly bound to the body by the viscid web, and it was so wrapped in webbing that I thought it best to chloroform it. Male. Testes small (Kilosa, 16. xii. 22).

Of thirteen occupied nests examined to-day, two had one fresh egg apiece, another held two fresh eggs, whilst a fourth had two hard-set and a fifth three hard-set eggs. The remaining eight held young in all stages. The parent birds all allowed themselves to be lifted off their nests. Fully nine of the nests had the nest of a Wire-tailed Swallow for a foundation. Many other nests were empty (Frere Town, 30. v. 23).

CAPRIMULGIDÆ.

CAPRIMULGUS EUROPÆUS MERIDIONALIS Hartert.

A male Mediterranean Nightjar was shot at Kilosa on 4. ii. 21, and a female at Suna, Singida, on 27. ii. 22.

CAPRIMULGUS FOSSEI MOSSAMBICUS Peters.

Two eggs of the Mozambique Nightjar were brought to me by my collector at Kilosa, 26. xi. 20. They measured 28×20 mm. The one was addled, whilst the other held a very small embryo.

CORACIIDÆ.

CORACIAS GARRULUS GARRULUS Linn.

A female of the European Roller was shot at Kilosa on 1. ii. 21. They were observed to be very common in the Tabora District during November of the same year. Fairly common and feeding on grasshoppers at Ilonga, iii. 23. Parasitic nematodes in stomach were in too poor condition for definite determination, but were possibly *Hadjelia* sp.

MEROPIDÆ.

MELITTOPHAGUS PUSILLUS MERIDIONALIS Sharpe.

Two newly-hatched young of the Little Southern Bee-eater were in a hole in the side of an ant-bear burrow which was occupied at the time by a pair of porcupines (Sagayo, 4. xi. 22).

MEROPS APIASTER APIASTER Linn.

Shot several European Bee-eaters, which have been numerous here for the past week or two. Their long tail-feathers are just beginning to show (27. xii. 20). These birds are still here; on several occasions during the past fortnight I have thought that they were assembling for departure. They are in excellent plumage (5. ii. 21). The bee-eaters are still abundant here (Kilosa, 13 & 30. iii. 21).

Many seen flying (Luguo, 10. xi. 21). On my return I heard the bee-eaters almost daily last week (Kilosa, 26. xii. 21). The bee-eaters are very busy with the millions of bees at the rubber blossoms (Kilosa, 6. i. 22). I heard the bee-eaters about a fortnight ago for the first time this year (Kilosa, 1. ii. 23); still here (Kilosa, 1. iii. 23). I may add that *M. nubicus*, *persicus*, and *superciliosus* are all found here quite commonly.

BUCEROTIDÆ.

LOPHOCEROS JACKSONI O.-Grant.

The Wazigoor call Jackson's Hornbill "Kwenabe," which may be specific, as they call *Bycanistes* "Hondohondo" and *Bucorvus* "Mkinga." They eat this *Lophoceros*. Two males were shot at 12 p.m. and 6 p.m., and their stomachs contained large numbers of black ants, other insects, and seeds of fruit. A female contained a stick insect, beetle elytra, seed of the "mziga tree," and fruit of the "mkongo." A third male had in its stomach a stink-ant (*Paltothyreus tarsatus?*), a black carabid, and both seeds and fruit like the female (Wami River camps, 27. viii.-2. ix. 21).

ALCEDINIDÆ.

? HALCYON LEUCOCEPHALUS CENTRALIS Neum.

A kingfisher left its burrow in a bank at the bottom of a ravine. The nest-hole was just ten feet from the bottom of the water-course, which is now dry. In the nest-hole were two roundish white eggs approximately 25 mm. diameter and on the point of hatching. Two examples of this species were found drowned in a water-butt! (Kilosa, 18. xii. 20).

CUCULIDÆ.

CENTROPUS SUPERCILIOSUS INTERMEDIUS van Som.

Caterpillars, grasshoppers and beetles, and two species of parasitic worms were found in the stomach of a female Hackle-necked Coucal (Nairobi, ix. 19).

CENTROPUS SUPERCILIOSUS LOANDÆ C. Grant.

Worms in a female were identified as *Davainea* sp. (Kilosa, 17. viii. 20). Another coucal was heavily infected with lice. One of these birds was also found drowned in the same butt as the kingfishers mentioned in a preceding paragraph.

CUCULUS CANORUS GULARIS Steph.

At 6 p.m. a Yellow-billed Grey Cuckoo was calling in the thorn-bush near camp. Its note seemed to lack the rich ringing sound it has in the spring-time at home, but was unmistakable. I answered it about twenty times, while my collector stalked and shot it—a male in bright clean plumage with large testes (7 × 5 mm.). The stomach contents were too triturated to be recognizable excepting for long caterpillar hairs (Zengeragusu, 1. xi. 21). Many cuckoos flying (Luguo, 10. xi. 21). Two seen at close quarters (Kipera, 22. ii. 23).

CAPITONIDÆ.

LYBIUS ALBICAUDA ALBICAUDA Shell.

Two Black-billed White Barbet nestlings were found in a hole in the banks of the (dry) Shimiyu River at Sagayo on 8. xi. 22.

PICIDÆ.

CAMPOTHERA spp.

My attention was attracted by the noise made by two young woodpeckers in a knot-hole of a thorn-tree in open thorn-bush country. The young were practically fledged and making a hissing sound; the nest-hole was only two feet from the ground (Mtali's, 21. x. 21).

Birds of another species, called "Kinente" in Kinyaturu, were seen feeding their young in a nest-hole which they had made in a branch some thirty feet from the ground. Both species had red-headed males and this species a black-headed female (Mbonca, 29. ix. 22).

COLUMBIDÆ.

TRETERON DELALANDEI GRANTI van Som.

A new worm (*Ascaridia fasciata* Baylis) was found in the co-type specimen of the Coastal Green-tailed Green Pigeon shot at Dar-es-Salaam, 7. xi. 18.

STREPTOPELIA SEMITORQUATA SEMITORQUATA Rüpp.

A nest containing two eggs remarkably different in size. One measured 36×23 mm., the other 32×24 mm. Both slightly incubated (Kilosa, 22. vi. 21).

PSITTACIDÆ.

AGAPORNIS PERSONATUS Rehw.

Four white eggs of the Yellow-breasted Love-Bird measuring 22×17 mm. were taken from a hole in a baobab-tree at Mahaka, Dodoma, on 17. iv. 22.

STRIGIDÆ.

TYTO ALBA AFFINIS Blyth.

A "nest" of the African Barn-Owl was found beneath the galvanized sheets forming the roof of a house; the bird gained admission through a small ventilating hole. Two fresh eggs measuring 40×31 mm. were found on a huge accumulation of pellets which were mostly disintegrated. Besides the very common local rats (*R. rattus alexandrinus* and *R. coucha microdon*) there were the remains of a shrew (*Crocidura flavescens*). Some

of the skulls were in very fine condition, beautifully cleaned (20. v. 21). The hen bird was transferred to an aviary, where she laid an egg the following day, but instead of laying it in a big box of pellets provided, she dropped it on the floor presumably, for it was smashed (Kilosa, 21. v. 21).

A young owl, unable to fly, was picked up in the grass close to this house the following year, on 31. vii. 22. Of fifteen parasites from the stomach of this species Dr. Baylis writes that these worms are *Habronema* sp., "probably '*Spiroptera*' *penihumata* Molin, although this is said to belong to a different genus from *Habronema*."

BUBONIDÆ.

ORUS LEUCOTIS? GRANTI Kollibay.

Three White-faced Scops Owls, apparently birds of the year, ♂ ♂ ♀, were flushed from a thorn-tree in fairly close thorn-scrub. Each had the remains of a single dark-coloured rat in its stomach (Mtali's, 19. x. 21).

GLAUCIDIUM PERLATUM Vieill.

A Pearly Owl had a large *R. c. microdon* in its stomach (Kilosa, 26. vii. 21).

GLAUCIDIUM CAPENSE SCHEFFLERI Neum.

A female with very enlarged ovules sitting in a thorn-tree in bright sunshine. Its stomach contained a male gecko (*Lygodactylus picturatus*) and a grasshopper. This is the bird that makes a peculiar bubbling note just before dusk (Wami River, 3. ix. 21).

BUBO LACTEUS Temm.

I was shown an empty ten-gallon petrol drum in which a Milky Eagle-Owl had nested in the fork of a rubber-tree only eight feet from the ground and fifty yards from the house. The one end of the drum had been filled in with plaited grass to induce bees to live in it. On October 1st the Rev. R. Banks flushed an owl from it, and found the nest contained two large white eggs. To-day there was a broken shell on the ground showing faint traces of incubation; the other was missing—probably taken by a native (Kilamatinde, 5. x. 21).

BUBO AFRICANUS AFRICANUS Temm.

A Lesser Grey Eagle-Owl banged against the mosquito gauze which encloses the verandah. Was it trying to take some insect which was coming to the light, and itself misjudged the distance? I shot it, and on examining the stomach found it to contain half-a-dozen beetle elytra and one cricket (Kilosa, 18. i. 21).

FALCONIDÆ.

FALCO RUFICOLLIS Swains.

A male Red-necked Falcon shot at 8 a.m. was found to have the remains of a mouse and the leg of a grasshopper in its stomach (Izikisia, 16. xi. 21).

FALCO SUBBUTEO SUBBUTEO Linn.

Hobby Hawks are very common here just now, their coming synchronizing with the arrival of the rains. A female shot to-day had its stomach very full of termites (Simbo, 14. xi. 21).

CERCHNEIS TINNUNCULUS TINNUNCULUS Linn.

The European Kestrel is very numerous here. In the stomach of one were parasitic nematodes which Dr. Baylis says are referable to *Acuaria (Dispharynx)* sp., possibly *A. (D.) rectovaginata* (Molin) (Morogoro, 24. i. 18).

CERCHNEIS NAUMANNI Fleisch.

A pair of Lesser Kestrels were killed with one shot. The stomach of the female was distended with black ants, whilst there were very few in that of the male. 8 a.m. (Izikisia, 16. xi. 21).

ELANUS CÆRULEUS Desf.

My collector found a pair of Black-shouldered Kites building at Tindiga in June 1920, but on his revisiting the place in July found that the tree had been cut down by local natives with a view to destroying the nest; two eggs were lying smashed upon the ground. Lice (*Philopterus* sp.) were found on a specimen shot at Nairobi.

MILVUS MIGRANS PARASITUS Daud.

Returning to camp long after dark, probably between 7 and 7.30 p.m., my attention was attracted by a huge flight of birds which passed low over our heads with much noise and whistling cries, and commenced settling in a baobab-tree some two hundred yards behind me. They were coming from an easterly or south-easterly direction, and there must have been quite three hundred of them. Having no idea what they were, I sighted two against the sky and killed four with one shot. The stomachs contained (i.) a scarab and a great many small grasshoppers, (ii.) a single grasshopper, (iii.) two grasshoppers, (iv.) empty. I visited this tree again to see if it might be the nightly rendezvous of all the local kites for roosting purposes, but there were none to be seen (Sagayo, 27. x. 22).

A great many kites are about the camp, and to-day one was picked up in an exhausted state with the skinned body of a mouse (thrown out by the skinners) fixed to both upper and lower

mandibles. An examination of its claws showed that there was but one (the third in each case) on each foot. The other toes were stumps showing the metatarsal bones worn through, as if the bird had frequently tried to seize things with them. The loss of the claws was not of recent date. I kept the bird for twelve hours, but it seemed unable to feed, and in so low a state that I killed it and had the skin preserved (Sagayo, 31. x. 22).

I was informed that one of these kites was building in a palm-tree at Dar es Salaam in November (Dar es Salaam, 3. xii. 22).

An Unstriped Grass-Rat (*A. a. neumanni*) was found in the stomach of a male, shot to-day (Mtali's, 20. x. 21).

Two species of worms were found in the stomach of one kite, viz. (i.) *Idiogenes longicirrhosus* (Fuhm.) and (ii.) *Choanotenia infundibulum* var. *polyorchis* Klaproth (?) (Morogoro, 23. i. 18).

HIERAËTUS WAHLBERGI Sund.

A single example of Wahlberg's Brown Eagle was collected by the boy, who stated that he shot it when feeding on insects on the ground. It was a male and its stomach found to be distended with thousands of large yellow ants (*Camponotus* sp., I think) (Kilosa, 4. ii. 21).

In a great nest on the top of a high tree on the banks of the (dry) Shimiya River was found a downy nestling (31. x. 22). This was removed on the 9th of November, and grew very slowly though it fed well. On 25. xii. 22 I found that one of its legs was broken, and not knit properly, owing to some carelessness on the part of the native in whose charge it was during my absence. A curious thing was that I never saw the parent bird near the nest, even though I slept in a neighbouring tree one night and visited it at the first streak of dawn. Another day I posted my collector to watch, and he said that he saw the old bird circling in the sky above, but it did not approach (Sagayo and Kilosa).

SPIZAËTUS BELLICOSUS Daud.

An immature male of the Martial Eagle, measuring two feet nine inches from beak to tip of claws, and with a wing expanse of six feet six inches, killed a vulture (*N. monarchus*) after a fight lasting half an hour which was witnessed by Capt. Turuley, who subsequently shot the eagle. On examining its stomach I found it to contain the foot of a dove or pigeon and its stomach. On opening this second stomach I found seeds and a number of small white beads (Kilosa, 5. viii. 21).

EUTOLMAËTUS SPILOGASTER Bp.

Just as I shot a Hartebeest this bird came sailing overhead and alighted in a tree close by. Its stomach contained indeterminate rodent remains and a single nematode (*Porroecium depressum* (Zed.)) (Kipera, 8. ix. 22).

BUTEO AUGUR Rüpp.

A male Augur Buzzard shot on a rock had a large black rat (*A. tenebrosus*?) in its stomach (Mtali's, 19. x. 21). Another male shot in a tree had an Unstriped Grass-Rat (*A. a. neumanni*) in its stomach and in its crop a lizard (*Eremias spekii*) (Ndala, 15. xi. 21).

Two newly-fledged young were shown me by a native child who was about to eat them. I saw a nest in a thorn-tree among the rocks, but it was empty. The natives say that the buzzards nest here every year (Mtali's, 19. x. 21). A nest was seen in a tree leaning out over the edge of a rocky krantz. My collector shot the hen bird and took the eggs, which were quite fresh and measured 52×62 mm. They were white with brown smudges and reticulations, mostly at the lower pole, but also extending towards the upper pole (Shanwa, 23. x. 22).

MELIERAX CANORUS METABATES Heugl.

An immature male Northern Chanting Hawk with two lizards (*E. spekii*) in stomach (Ulugu, 7. xi. 21). An adult male with a pregnant lizard (*Agama atricollis*?), grasshoppers, and many parasitic nematodes, which were not preserved, in its stomach (Ndala, 15. xi. 21).

MELIERAX POLIOPTERUS Cab.

A nest containing a single nearly-fledged young of the White-rumped Chanting Hawk was built in a tree growing from a fissure in the rocks. Its plumage was strikingly different from the adult. The back plumage is nearly black; it has a central gular streak, but the lower breast shows signs of barring like the adult. When first seen it was being fed on an agama lizard by its parent, but it soon took to feeding itself on scraps of meat cut up small (Shanwa, 24. x. 22). The stomach of another specimen shot at Mwadira contained an agama and grasshoppers (19. x. 22).

CIRCAËTUS FASCIOLATUS Gray.

The Banded Harrier-Eagle is, I believe, a somewhat scarce bird; in the stomach of a male shot to-day there were remains of a rat (*R. c. microdon*) and the scales of a lizard, apparently those of *Mabuia striata* (Mkindo River, 8. ix. 21).

CIRCAËTUS CINEREUS Vieill.

A female Brown Harrier-Eagle had snake scales in its stomach (Mtali's, 19. x. 21).

KAUPIFALCO MONOGRAMMICA Temm.

The stomach contents of a One-streaked Hawk, shot at 7 a.m., were a gerbil (*Taterona vicina*?) and a freshwater purplish crab,

which (? the same one) I had encountered on the path at 4 p.m. yesterday (Kilosa, 19. ii. 21). A male had the skull and fur of a shrew (*Crocidura flavescens*) with many orthopteran remains and a few parasitic nematodes (Kilosa, 26. iv. 22). A very young Spotted Wood-Snake (*Philothamnus semivariatus*) and grasshoppers comprised the stomach contents of another male (Kimamba, 7. iv. 23). Yet another male shot at 5 p.m. had a galeodes, a large locust, two praying mantids, and other insect remains. It had also two parasitic nematodes, identified by Dr. Baylis as *Physaloptera ? acuticauda* Molin (Kilosa, 6. v. 21).

ASTUR ? POLYZONOIDES Smith.

A female with ovules somewhat enlarged. In stomach, the fur and feet of a rodent that looked like *Mus bella* (Wami River, 9. ix. 21).

POLYBORIDES TYPICUS Smith.

Salimu shot a female Bare-faced Whistling Hawk in immature and interesting plumage. The primaries and two of the secondaries in each wing were brown, and there were quite a number of light brown feathers among the inner wing-coverts. The bare skin around the eye was light yellow, the base of the bill between lorcs pink, the bill itself black. Eyes black. Legs yellow. In its stomach was an adult lizard (*Zonurus tropidosternum*) (Kipera, 5. viii. 22).

CIRCUS MACROURUS Gmel.

A Grey Harrier was infested with lice and in its stomach were nematodes (*Physaloptera ? alata* Rud.) (Morogoro, 28. ii. 18).

VULTURIDÆ.

NECROSYRTES MONACHUS Temm.

A worm (*Thelazia depressa* Baylis, 1920) was taken from the eye of a Brown Vulture.

IBIDIDÆ.

THRESKIORNIS ÆTHIOPICA Lath.

Just after sunset some fifty Sacred Ibises came flying across the plains to roost in a big tree overhanging from the rocks. The tree is also occupied by a score or more *Corvus scapularis* and probably as many *Milvus a. parasiticus* (Shanwa, 20. x. 22).

HAGEDASHIA HAGEDASH Lath.

My collector shot a female Great Glossy Ibis with a perfectly formed and coloured egg in its oviduct. This egg measured 51 x 46 mm., and was slightly greenish-white in ground-colour, spotted, blotched, or heavily smudged with brown. I told my

boy to return and search the neighbourhood thoroughly for a nest, and this he succeeded in finding in a tree growing from a fissure in the rock-face about 20 ft. from the ground. It was very difficult of access, and was eventually reached by coming down the fissure in the rock-face, which only a native with bare feet could negotiate. He then removed his putties and, tying them together, lowered them to me. I tied a net on to these, and the two eggs were safely lowered one by one. They measured 55×42 , and 61×42 mm. (Shanwa, 21. x, 22).

A male which was shot from a flock of three had the seed of a rubber-tree and a peculiar looking dipterous larva in its stomach (Kipera, 5. viii. 22).

PLATALEIDÆ.

PLATALEA LEUCORODIA LEUCORODIA Linn.

The European Spoonbill was shot at Kilosa on 4. iv. 21, and its stomach contained the head of a large dragonfly (*Anax* sp.) and the plastron parts of a big beetle (? *Copris* sp.) together with a little green stuff. Its intestines were teeming with tapeworms (*Cyclorchida omalancristrota* (Wedl.)).

PLATALEA ALBA Scop.

An African Spoonbill was shot at Sagayo on 8. xi. 22 by my collector.

ARDEIDÆ.

MESOPHOYX INTERMEDIUS BRACHYRHYNCHUS Brehm.

The stomach of a female Short-billed White Heron contained a frog and no parasites (Kilosa, 28. vi. 21).

ARDEOLA RALLOIDES Scop.

The stomach of a Buff-backed Heron held insect remains and three nematodes identified as *Contracæcum microcephalum* (Rud.) (Kilosa, 29. vi. 21).

ARDEA PURPUREA PURPUREA Linn.

The stomach of a male Purple Heron contained a house-rat (*R. r. alexandrinus*), several small fish, and a dragonfly with black bands on its transparent wings. Parasitic nematodes were *Contracæcum microcephalum* (Rud.) (Kilosa, 11. vii. 21).

ARDEA CINEREA CINEREA Linn.

A male of the European Grey Heron was shot at Kilosa on 6. vii. 21. A female at Sagayo on 7. xi. 22. The latter was shot at 2 a.m. when it was fishing in a pool of the Shimiyu River.

BUTORIDES ATRICAPILLA Afzel.

Two eggs of the Green-backed Heron of a uniform pale green colour and measuring 34×28 mm. were brought me from a swamp by my collector. They were blowable, but had undergone considerable incubation (Kilosa, 5. vii. 21).

In the stomach of a specimen were worms identified as *Hymenolepis* sp. (near to *H. unilateralis* (Rud.)); in the intestines of the same bird was another nematode—*Contracacum microcephalum* (Rud.) (Morogoro, 15. i. 18).

SCOPIDÆ.

SCOPUS UMBRETTA BANNERMANNI Grant.

The East African Hammer-head is known to the Wazigoor as "Mzeringee," the Wahehe as "Mgetu," the Wanyimwezi as "Mgenyi." A cock bird, shot while flying overhead this morning, had a frog and a shrimp and a number of parasitic nematodes (*Contracacum microcephalum* (Rud.)) in its stomach (Mkata River, 25, viii. 21).

A nest was found in the fork of a tree leaning over a lagoon which was 200 yards long but rapidly drying up. The nest held four young within a week of being fledged, and they throve in captivity for six months, but died when transferred to Regent's Park. They would probably have died if left in the nest, as the surrounding ground was swarming with soldier-ants intent on destroying every living thing; many were already on the trunk of the tree (Mkata, near Station, 14. ix. 21).

CICONIIDÆ.

ABDIMIA ABDIMI Licht.

The Purple Storks always appear with the first rains, and are therefore known to many tribes of natives as the "Rain-birds." They have a peculiar way of circling in the air like a column of smoke, more particularly just before sunset. The stomach of a male examined contained centipede, grasshoppers, cockchafer, and three other species of beetles (Simbo-Ndala Road, 14. xi. 21). A great flock appeared at Sagayo camp during the first week in November 1922.

EPHIPPIORHYNCHUS SENEGALENSIS Shaw.

A male shot at Tindiga measured 6 feet 4 inches from tip of beak to tip of longest toe-claw and 8 feet 5 inches across the wings; the two fleshy lappets depending from the base of the lower bill are bright lemon-yellow, not "bright crimson" as stated by Stark and Sclater*.

I also saw Saddle-billed Storks at Kilamatiunde and Kipera, but it is a scarce bird and goes singly or in pairs.

* Stark & Sclater, 'Fauna of South Africa,' vol. iv, p. 44, line 7.

ANASTOMUS LAMELIGERUS Temm.

The stomachs of a pair of Open-billed Ibis shot here contained some hard muscle-like lumps of matter, apparently from shell-fish. No parasites were observed (Kilosa, 2. iv. 21).

ANATIDÆ.

SARKIDIORNIS MELANOTUS AFRICANUS Hartl.

The Knob-billed Goose is very common here. An immature female shot to-day had down still mixed with its feathers. In the stomach and crop there was a large quantity of maize (Kilosa, 30. v. 21).

COLYMBIDÆ.

PODICEPS RUFICOLLIS CAPENSIS Salvæd.

The following notes on the nidification of the Cape Grebe were all made on a small swamp or accumulation of temporary water which forms after the big rains and lasts about three months:—

Found a floating nest containing two dirty-white eggs (14. iv. 21). Revisited the nest at 5 p.m. on the 15th when there were three eggs, and again to-day when there were six. The hen bird appeared flapping about in the water in an attempt to decoy us away. Not far away I found another nest with four eggs (18. iv. 21). The bird, which laid four eggs and whose nest I robbed, laid a fifth egg yesterday on a few partly-submerged reeds which it had collected together for the purpose some fifty feet from the abandoned nest. To-day it laid its sixth egg in the deserted nest of another bird. The full clutch would appear to be six eggs (20. iv. 21).

A new nest with two eggs (22. iv. 21); five in this nest, and one of them partly incubated (25. iv. 21). A fourth nest found containing two eggs (25. iv. 21). The fourth nest held seven eggs, some fresh, some incubated. Shot what I thought to be the hen bird, but she had a pure-white egg in the oviduct measuring 36 × 24 mm. and two enlarged ovules in the ovary. The "colour" of this egg compared with the brown reed-stained ones in the nest was very striking (3. v. 21).

Revisited the swamp for the first time since 3. v. 21. One nest held two eggs. Two pairs of birds were swimming about with their young; their conduct was now very different; previously they had only splashed and dived to decoy one away, now they showed themselves boldly. From time to time one of the birds would utter a sharp whistling note, and having thus attracted attention, would dive with a splash; after a few moments the head would appear some distance off, and the cry would be repeated to lead one away from the young. These were entirely black, showing no rufous whatever; broken bits of shell were left in the nest from whence they came. It was a pretty spectacle to watch the old ones taking the young for rides on their backs, themselves semi-submerged (30. v. 21).

The nest, which held two eggs yesterday, had only one in it to-day, the other having hatched out, as was evidenced by the bits of shell left. The remaining egg had been carefully covered with grass, as is the custom with all but deserted eggs (31. v. 21). This egg still in the nest; another nest was found also with two eggs, uncovered and obviously deserted, as they had never been covered, being only stained on the lower surface. They were very fresh however (Kilosa, 1. vi. 21).

Two species of worms were found in the specimen shot, viz. (1) *Diacocestus aspera* (Mehlis) and (2) *Hymenolepis* sp.

RALLIDÆ.

GALLINULA CHLOROPUS BRACHYPTERA Brehm.

Three nests of the African Moorhen were found built in clumps of grass or reeds in deep water. The first had two eggs on 22. vi. 21, the second two eggs on 6. viii. 21, the third five eggs on the same date. Like the Common Moorhen's eggs, these show considerable variation in size, averaging about 41×30 mm.; the coloration is also identical with that of the English eggs and, like them, varies a good deal even in the same clutch, (Kilosa, v. d.).

GALLINULA ? ANGULATA Sund.

A single egg of the Lesser African Moorhen, measuring 43×31 mm., pale in colour with fine frecklings more like a coot's egg (Kilosa, 22. vi. 21).

PHASIANIDÆ.

NUMIDA CORONATA REICHENOWI O.-Grant.

Five eggs of Reichenow's Helmeted Guinea-fowl measuring 48×36 mm. were taken at Suna in February 1922 by my native collector.

NUMIDA MITRATA Pall.

The Coast Guinea-fowl is extraordinarily abundant between Mkata and the Wami River and at many other places in the Morogoro District. I have killed five with one shot, and a native killed eight with two on the path just outside the house (Kilosa, 4. viii. 22). Lice (*Goniodes numida* Mjüb.) were taken on a Kilosa bird on 11, iii. 1921.

PARIDÆ.

PHYLLOPEZUS AFRICANUS Gmel.

Bits of quartz and grass seeds in the stomach of a male African Jacana with large testes shot this day (Kilosa, 9. iv. 21).

MICROPARRA CAPENSIS Smith.

I shot a Pigmy Jacana from a flock of three seen on the swamp; its stomach contained insects; ovules large as if the breeding-time is near (Kilosa, 1. vi. 21).

CHARADRIIDÆ.

RHINOPTILUS CINCTUS CINCTUS Heugl.

A native brought me a Three-banded Courser cock which he snared as it returned to an egg which he had found buried in sand with only the top showing; the egg was well incubated. Heads of soldier-ants were found in the stomach of a female (Zengeragusu, 3. & 1. xi. 22).

BURHINUS CAPENSIS CAPENSIS Licht.

A young Cape Spotted Stone-Curlew in down was brought me (Mdjengo's, 24. x. 21).

STRUTHIONIDÆ.

STRUTHIO CAMELUS MASSAICUS Neum.

As we were making camp a hen ostrich was to be seen some two hundred yards away casually feeding in the stubble of a mealie-field. Later I met it a mile away and carefully stalked it (without a gun). After I got within fifty yards my self-gratulation melted away, and when I was within twenty yards I felt sure the bird had some history. I enquired of an old man at a neighbouring kraal, and he told me that it had been in the neighbourhood for a year past, and was supposed to have strayed from a mission at Itigi (twelve miles away) where some had been reared. It lived all alone in the bush and came daily to the shambas to feed or be fed. "It will come if you call it," said he, and picking up an old maize cob from the ground, he held it out and called as one might call chickens, when, sure enough, the bird came running, but halted ten feet away on seeing that the object proffered was not edible. The old man said it would feed from one's hand if matama was held out to it (Mbonoa, 29. ix. 22).